

What is claimed is:

1. A multiple clutch unit for a power transmission system, said clutch unit comprising: a first clutch non-rotatably connected to a first shaft; a second clutch non-rotatably connected to a second shaft and arranged coaxially with the first clutch; a first piston/cylinder unit for actuating the first clutch; a second piston/cylinder unit for actuating the second clutch; wherein the first piston/cylinder unit includes a substantially cup-shaped cylinder that is non-rotatably and axially-movably connected with the first shaft.

2. A multiple clutch unit according to claim 1, wherein the cup-shaped cylinder includes a first working chamber, and the first shaft includes a throughbore that communicates with the first working chamber for conveying pressurizing fluid to and from the first working chamber.

3. A multiple clutch unit according to claim 1, wherein the cup-shaped cylinder is non-rotatably but axially-movably connected to the first shaft by a positive connection.

4. A multiple clutch unit according to claim 1, including a cylinder coupling element, wherein the first clutch includes a plurality of axially-spaced, radially-extending inner disks and a plurality of axially-spaced, radially-extending outer disks,

and wherein the cup-shaped cylinder is operatively coupled with the inner radial disks of the first clutch by the cylinder coupling element.

5. A multiple clutch unit according to claim 2, including a shaft coupling element connected in an axially fixed manner to the first shaft and operatively coupled with the first clutch.

6. A multiple clutch unit according to claim 5, including a second working chamber positioned between the shaft coupling element and the cup-shaped cylinder, wherein the second working chamber is in fluid communication with the first working chamber.

7. A multiple clutch unit according to claim 1, including a transmission input element rotatably carried on an outer circumferential surface of the cup-shaped cylinder, wherein the transmission input element is non-rotatably connected to both the first clutch and the second clutch.

8. A multiple clutch unit according to Claim 7, including a disk connection element having a substantially U-shaped cross section and operatively coupled with the transmission input element, wherein each of the first and second clutches includes respective outer radial disks, and wherein each of the outer radial disks of the first and the second clutch is non-rotatably connected by a tooth system to a leg of the disk connection element.

9. A multiple clutch unit according to claim 8, wherein the U-shaped disk connection element defines a substantially annular inner space for receiving disks of the first clutch.

10. A multiple clutch unit according to claim 1, wherein the second piston/cylinder unit includes a rigid cylinder and an axially displaceable piston element received within the rigid cylinder, and wherein the displaceable piston includes a bearing device for coupling the second clutch with a clutch actuation element.

11. A multiple clutch unit according to claim 1, wherein the second shaft is a hollow shaft that surrounds the first shaft.

12. A multiple clutch unit according to claim 1, including a torsional vibration damper connected upstream of the first and second clutches, relative to a positive power flow direction through the clutch unit.

13. A multiple clutch unit according to claim 1, wherein the first and second clutches are multiple-disk clutches.

14. A multiple clutch unit according to claim 3, wherein the positive connection is a tooth system.

15. A multiple clutch unit according to claim 5, wherein the shaft coupling element is operatively connected with the inner radial disks of the first clutch.

16. A multiple clutch unit according to claim 6, wherein the communication between the first and second working chambers takes place through the positive connection between the cup-shaped cylinder and the first drive shaft.

17. A multiple clutch unit according to claim 7, wherein the transmission element is operatively connected with outer radially-extending disks carried by each of the first and second clutches.